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REMARKS

Claims 1-19 are pending in the application. Claims 1-12 and 14-19 were rejected and claim 13 was objected to in the present office action. By this amendment, claims 1-3 and 9-19 have been amended and claims 7 and 8 have been canceled. Accordingly, claims 1-6 and 9-19 remain pending in the application for further consideration by the Examiner.

If the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, the Examiner is invited to contact Applicants' attorney so that arrangements can be made for resolving such issues as expeditiously as possible to advance the case to issue.

Objection to the Specification

Applicants have amended the abstract of the disclosure to contain less than 150 words.

Claim Objections

Claim 13 was objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 13, in its presently amended form, is now dependent from claim 9, which is further dependent from amended base claim 1. In view of these amendments, Applicants submit that claim 13 is of proper dependent form and properly further limits the subject matter of the base and intervening claims. For example, claim 13 recites a further limitation to "routing the digital container through the communication network" (as recited in base claim 1) such that "routing the digital container comprises routing the digital container based on the destination identified in the OCLI field", the OCLI field being introduced in intervening claim 9.

Claims 1 and 14-19 were objected to because of informalities. Applicants believe that the foregoing amendments to the respective claims overcome the objections.

Accordingly, Applicants believe claims 1 and 13-19 stand in condition for allowance and respectfully request that the Examiner withdraw the objections.

35 U.S.C. 102(b) Rejection

Claims 1-7, 10-11 and 14-19 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,440,547 ("Easki et al."). Claim 7 has been canceled and claims 1-3, 10, 11 and 14-19 have been amended to more clearly recite that which Applicants regard as their invention. In view of the amendments and the remarks that follow, Applicants believe that Claims 1-6, 10-11 and 14-19 include limitations that are not at all taught or even suggested by Easki et al. and therefore are not anticipated by Easki et al.

Briefly, Easki et al. discloses an addressing technique for use in ATM-based networks that is intended to overcome the shortcomings of prior art ATM systems. More specifically,

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Easki et al describe these shortcomings as being related to the "nodes dependent VCI/VPI uniformity" aspect of conventional ATM processing. In particular, Easki et al. describe how ATM cells are traditionally routed from source to destination terminals based on VCI/VPI processing at the network nodes. Because of the fact that the VCI/VPI parameters are only uniform for respective switching points instead of on a network-wide basis, VCI/VPI values must therefore be processed and converted every time an ATM cell passes through a node toward the destination.

The solution proposed by Easki et al. is to assign a unique identification parameter to each of the terminals (i.e., destination terminals) and to insert the respective specific identification parameter into the 5-byte header of each individual ATM cell that is to be routed to its respective destination terminal. In this manner, an individual ATM cell is then routed to a destination terminal on the basis of the specific identification parameter that corresponds to the particular destination terminal and that has been inserted into the 5-byte header for the individual ATM cell without the need for rewriting/converting VCI/VPI values at the intermediate exchange nodes. Accordingly, Easki et al.'s method requires the modification of the header information for each ATM cell to be routed through the network but supposedly results in simplified routing because of the fact that routing based on the unique terminal-associated identifier overcomes any issues associated with node-dependent VPI/VCI's in a network.

While Applicants agree that their claimed invention and that disclosed by Easki et al. are similar in their intent to provide an improved and more simplified addressing scheme, Applicants respectfully submit that any similarities end there and that the approaches are quite different and distinguishable. For example, Applicants are not modifying the headers of individual transmissions (e.g., ATM cells as in Easki et al.), but instead are forming a digital container for carrying a plurality of separate transmissions within the payload of the container and routing this digital container based on destination information contained only within the container's single header section. As such, the container is routed to a single destination node that services the one or more users for whom the transmissions are destined. In this manner, the network nodes do not need to process the individual headers and payloads carried within the separate transmissions, which are instead processed by the user nodes upon delivery (e.g., at the sub-network level).

These distinguishable features are recited in Applicants' independent claims. For example, claim 1 recites forming a digital container at a first network node, the digital container including a header section and a payload section, wherein the payload section is capable of carrying a plurality of separate transmissions formatted according to one or more protocols.

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Applicants respectfully submit that Easki et al. do not disclose this limitation, but instead only describe the modification of headers in individual ATM cells to facilitate routing of the 48-byte payload of the individual ATM cell, which is different than forming a digital container that includes a payload section for carrying a plurality of separate transmissions as claimed by Applicants.

Moreover, Applicants respectfully disagree with the correlation being made in the Office Action between the forming of a digital container, as now claimed by Applicants, and the cited disclosure in Easki et al. regarding VCI/VPI parameters in the ATM cell header along with the ATM cell payload making up part of a digital container. While VCI/VPI parameters do form part of the 5-byte ATM cell header and are used for routing the individual ATM cell to its destination, this is still not the same as the digital container as recited in amended claim 1. The fact that VCI/VPI parameters are changed each time they enter a node is also not the same as forming a digital container, as now claimed by Applicants, despite the assertion to the contrary in the Office Action. In particular, the formation of an ATM cell as described in Easki et al. (e.g., modifying the VCI/VPI parameters in an ATM cell header and transporting along with the ATM cell payload) is not the same as forming a digital container that includes a header section and a payload section, wherein the payload section is capable of carrying a plurality of separate transmissions.

Furthermore, claim 1 recites routing the digital container through the communication network based only on destination information contained within the header section of the digital container. Applicants respectfully submit that Easki et al. do not disclose this limitation. As described, Easki et al. add a unique identification parameter into the header of the individual ATM cell and subsequently route based on that unique parameter. As such, Easki et al.'s disclosure is directed to the routing of individual ATM cells, albeit based on newly added header (destination) information for the corresponding ATM cell. This aspect of Easki et al. is therefore quite different from routing a digital container that carries a plurality of separate transmissions (formed as described above) using only destination information within the header section of the digital container, as claimed by Applicants, instead of using header information corresponding to the separate transmissions within the container payload. In this manner, routing through network nodes according to Applicants' claimed invention is simplified because routing of the container based only on its header information does not require header information (e.g., user destinations) of the multiple, separate transmissions carried within the container's payload.

Applicants further submit that Easki et al. do not disclose a payload section of a digital container including transmissions for only the one or more user nodes serviced by the second

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network node, as set forth in Applicants' claim 1. In particular, Applicants could not find any teachings in Easki et al. that would even suggest forming a container for carrying a plurality of separate transmissions such that the transmissions in the container are for users serviced only by a single network node to which the container is addressed.

In view of the foregoing remarks, Applicants' respectfully submit that Easki et al. do not disclose each and every limitation recited in Applicants' claim 1, as presently amended, and therefore does not anticipate claim 1. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection as to claim 1.

Independent claims 14, 15 and 17-19 were rejected on similar grounds as claim 1. These independent claims have been similarly amended and are therefore believed to be patentable over Easki et al. at least for the same reasons set forth above for claim 1.

Claim 16 has also been amended and is believed to be allowable over Easki et al. In particular, Applicants respectfully disagree that Easki et al. discloses establishing a signaling connection between first and second user nodes in the manner now claimed by Applicants. For example, the cited disclosure in Easki et al. or any other portion of the reference regarding the use of well-known virtual circuits and virtual paths or the use of signaling to set up such virtual circuits and paths is not the same as what is now being claimed by Applicants. To the contrary, Applicants' claim 16 recites:

- establishing a signaling connection between a first and second user node by forming a second digital container at a first network node,
- the second digital container including a header section and a payload section, wherein the payload section comprises one or more signaling messages supplied by the first user node.

Easki et al. does not teach or suggest each of these limitations, which are not at all akin to simply setting up virtual circuits and virtual paths. Furthermore, Applicants were unable to find any disclosure in Easki et al. that teach or suggest:

- routing the second digital container through the communication network based only on destination information contained within the header section of the second digital container, or
- routing the one or more signaling messages carried in the payload section of the second digital container to the second user node serviced by the second network node, such that signaling is established between the first and second user nodes.

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejection as to each of independent claims 14-19.

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Claims 2-6, 10 and 11 each depend from and therefore include all the limitations of base claim 1. As such, these dependent claims are therefore believed to be allowable for the same reasons set forth above for base claim 1 as well as for other novel features therein. Applicants therefore request that the Examiner withdraw the rejection as to dependent claims 2-6, 10 and 11 accordingly.

35 U.S.C. 103(a) Rejection

Claims 8, 9, 12 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Easki et al. in view of U.S. Patent No. 5,926,478 ("Ghaibeh et al."). Claim 8 has been canceled and claims 9 and 13 have been amended herein.

Claims 9, 12 and 13 are dependent, either directly or indirectly, from amended base claim 1 and therefore include all the limitations of base claim 1. As set forth above, Applicants submit that Easki et al. falls short of teaching or suggesting each and every limitation of base claim 1. Although Ghaibeh et al. is only being cited to supply the additional limitations now set forth in the dependent claims, Applicants submit that Ghaibeh et al. do not cure the deficiencies noted above for Easki et al. That is, Ghaibeh et al. do not disclose or suggest the limitations that Applicants previously discussed as lacking from Easki et al. As such, the combination of Ghaibeh et al. with Easki et al. still falls short of teaching or suggesting all the limitations recited in dependent claims 9, 12 and 13. Consequently, claims 9, 12 and 13 are believed to be patentable over the combination of Easki et al. and Ghaibeh et al. for similar reasons set forth above for base claim 1 as well as for other novel features therein.

Moreover, with regard to claim 9, Ghaibeh et al. is being relied upon to provide the missing limitation from Easki et al. that the header section includes an optical logical channel identification (OLCI) field for identifying the destination of the digital container. Applicants respectfully disagree with this reading of Ghaibeh et al. The destination address described by Ghaibeh et al. and referenced in the Office Action is VPI 82 and VCI 84 as shown in Figures 2 and 4, for example. Applicants acknowledge that in standard ATM cell formatting and processing, the VPI and VCI fields in the ATM 5-byte cell header do identify the destination of that particular 53-byte ATM cell. However, this is not the same as an OLCI field that applies to the digital container recited in amended base claim 1 and discussed previously.

In Ghaibeh et al., each 53-byte ATM cell (up to a total of 178 ATM cells) transmitted within a 125 microsecond frame still carries its own specific destination addressing within its own corresponding 5-byte header within the individual ATM cell. Accordingly, Ghaibeh et al. are describing nothing more than standard ATM processing in which each 53-byte ATM cell carries its own 5-byte header, which includes its own VPI and VCI destination addressing fields. As

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such, the VPI and VCI addressing information correspond to the destination of the individual ATM cell and not even the frame as suggested in the office action. As described by Ghaibeh et al., a frame includes a plurality of ATM cells and each network unit NU (i.e., node) receives all the ATM cells in a frame and each NU evaluates the VPI/VCI's of each cell to see whether the cell is intended for that NU (see, e.g., col. 5, line 37 et seq.). This feature described by Ghaibeh et al. is characteristic of passive optical networks (PONs). Because the VPI/VCI destination addressing described by Ghaibeh et al. pertains to addressing of the individual ATM cells, Ghaibeh et al. therefore fails to teach or suggest an OCLI field that corresponds to a digital container as defined in Applicants' claims. Consequently, Applicants submit that claim 9 is patentable over the combination of Easki et al. and Ghaibeh et al. for at least this reason as well.

With regard to claim 12, Applicants also do not agree that Ghaibeh et al. discloses an OCLI field that includes a network node destination address and a user node destination address as recited in Applicants' claim. As stated above for claim 9, VPI 82 and VCI 84 are destination addresses for the particular ATM cell and there are no teachings of an OCLI field for a digital container, let alone an OCLI field that includes both a network node and user node destination address. In fact, the teachings in Ghaibeh et al. are quite clear that, consistent with normal signal routing and distribution in PONs, each NU node receives all the ATM cells in a frame whether or not the ATM cells are intended for each NU. As described in col. 5, line 37 et seq., by way of example, each NU then evaluates the VPI/VCI fields of the individual ATM cells in a frame to see whether the ATM cells are intended for that NU. As such, there are no teachings in Ghaibeh et al. about an OCLI field that includes a network node address (e.g., NU address) because there is no need or use for a network node address in the passive distribution scheme (i.e., PON) disclosed by Ghaibeh et al. Consequently, Applicants submit that claim 12 is patentable over the combination of Easki et al. and Ghaibeh et al. for at least this reason as well.

Although claim 13 was rejected over the same combination of Easki et al. and Ghaibeh et al., Applicants were unable to find any specific grounds or explanation for the rejection of claim 13 on that basis.

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of claims 9, 12 and 13.

Conclusion

In view of the foregoing, Applicants believe that all pending claims stand in condition for allowance. Accordingly, Applicants respectfully request reconsideration of the application and

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passage of the case to issue. Any questions can be directed to the Applicants' attorney at the number below.

Respectfully submitted,

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